

STURMIA BELLA (MEIGEN) (DIPT.: TACHINIDAE). NEW TO WALES

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Of 15 *Aglais urticae* (L.) (Lep.: Nymphalidae) pupae collected from garden sites, 12 (80%) were parasitised. One of these was taken by a predator before the identity of the parasitoid could be confirmed, three were parasitised by *Pteromalus puparum* (L.) (Hym.: Pteromalidae) and eight by *Sturmia bella* (Dipt.: Tachinidae), a species new to Wales.

Introduction

The acquisition, earlier this year, of an adjacent plot of land on which Common Nettle (*Urtica dioica*) formed drifts along several metres of the original boundary, provided an opportunity to encourage nymphalid activity. The nettles were cut back in early June in order to promote the tender, fresh growth preferred by the Small Tortoiseshell *Aglais urticae* (L.) for egg-laying (Thomas & Lewington, 1991) and within weeks many egg batches were observed. The warm summer of 2003 provided ideal breeding conditions, leading to a sustained period of ovipositing by *A. urticae* into mid-August. Very large clusters of eggs were commonly found, with eggs typically laid one on top of the other forming low mounds. Although there was no close monitoring of the site, casual checks indicated that larval development was unremarkable. The first pre-pupation larva was observed during the first week of September, suspended in an exposed position on an east-facing house wall, approximately 19 metres from the nettle-bed. This emerged successfully on 14 September, leaving quite heavy meconium staining on the cream-coloured, freshly painted house wall. Although the various stages of *A. urticae* had been given every encouragement in their development, the time had come for action to be taken if further wall cleaning was to be avoided!

Between 16 and 19 September, 15 *A. urticae* pupae were 'harvested' from the house or garage walls during which operation it became clear, from their darkening appearance and lack of rigidity, that many were no longer viable. Pupae were carefully teased from the wall, leaving as much of the silk pad as possible still attached to the cremaster. Four, apparently healthy pupae were suspended from a twig by means of quick-drying adhesive and the twig attached to a partially-shaded trellis outdoors. One of these pupae was subsequently found to be parasitised. Unfortunately, within days, all fell victim to predation. Eleven non-viable pupae, which were presumed to be parasitised, were placed loosely within a small plastic box and kept indoors, in a heated room.

Results

Over the period 21-24 September, eight tachinid fly larvae emerged from the *A. urticae* pupal cases and formed unattached puparia on the base of the box. Their confinement within the plastic box denied the tachinid larvae the opportunity to use

an "escape line" (Baumgart *et al.* 2003) when emerging from the *A. urticae* pupae, though there *is* some evidence of a proteinaceous strand, measuring 2.5 cm in length, in the box and attached to one of the host pupae. Four parasitoid puparia were sent to Mark Shaw at the National Museums of Scotland, who provided a provisional identification (on the basis of puparial characteristics alone) of *Sturmia bella* (Meigen). Rather than allowing these to develop prematurely indoors, they were placed in the cooler conditions of a garden shed for over-wintering. Confirmation of identity is therefore awaited for these, although there is little doubt. At the same time, two, parasitised *A. urticae* pupae were also sent to Mark Shaw, as the appearance of an exit hole within the wing area of the host pupa pointed to the presence of a second parasitoid. This was identified as the common, gregarious *Pteromalus puparum* (L.), a species that oviposits into the pupal stage of its hosts (Mark Shaw, *pers. comm.*). Between 7 and 11 October four tachinid flies emerged from the remaining puparia stored at room temperature at the author's address. All were again sent to the National Museums of Scotland where David Robertson confirmed the identity as *Sturuia bella*.

Discussion

Sturuia bella, a widespread and often common tachinid in continental Europe (Chandler *et al.* 2001, Baumgart *et al.* 2003), was added to the British list in 2000 (Ford *et al.* 2000). It has subsequently been recorded from many counties in southern England, with the closest known record to the Welsh border located at Severnside in south Gloucestershire (Matthew Smith, *pers. comm.*: Tachinid Recording Scheme website at <http://tachinidae.org.uk>). Unlike parasitoids such as *Pteromalus puparum*, the larva of *S. bella* appears to be solitary, killing its host in the final stages of development after the host has pupated, though the host is initially parasitised as a larva. Eggs of *S. bella* are deposited on the undersides of the target larval host-plant (in this case *U. dioica*), where they are unintentionally ingested by the host larvae (Herting, 1960). Butterfly larvae of the families Nymphalidae and Satyridae are stated as the usual hosts and this experience supports that observation. The high parasitism rate (80%) of *A. urticae* larvae, compounded by bird predation at the pupal stage, accounted for a complete loss of all 15 harvested larvae. However, my interference may have contributed to the downfall of the remaining three viable larvae, as I had seemingly increased their vulnerability by grouping them together, even though collectively they appeared less obvious (to the human eye) than as individuals at their original pupation sites on a cream-coloured wall. Interestingly, there are many similarities to an earlier published report (Rowell, 2001) on the parasitism of *A. urticae* larvae, where seven pupae out of 20 were found to be parasitised by *Sturuia bella*, a further seven by *Phryxe vulgaris* and two by *Pteromalus puparum*, though larger samples are surely required to establish if the observed parasitism rates are real.

Acknowledgements

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Kingdom and also for confirming *S. bella* as new to Wales. I am also grateful to Mark Shaw for his helpful comments on an earlier draft of this paper.

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Dewick's *Plusia*, *Macdunnoughia confusa* (Steph.) (Lep.: Noctuidae) in Hampshire

I was pleased to find a lovely fresh male Dewick's *Plusia*, *Macdunnoughia confusa* in my Lymington garden moth trap on the morning of 6 September 2003. As far as I am aware, this is only the fifth record for Hampshire.

This scarce migrant was first taken in Britain by A. J. Dewick in October 1951. By 1983, sixteen had been recorded (Skinner, B., 1984. *Colour Identification Guide to the Moths of the British Isles*. Viking). The present total now stands around fifty (Waring, P., & Townsend, M., 2003. *Field Guide to the Moths of Great Britain and Ireland*. British Wildlife Publishing). It is found commonly in the autumn on the north-west coast of Spain, and it could be that this is the origin of many British specimens. The spread of the species from the Eastern Palaearctic into Western Europe has been noted in the past.— ALEC S. HARMER, Covertside, Sway Road, Lymington, Hampshire SO41 8NN.

Lepidoptera on Hop *Humulus lupulus* at Etton, Northamptonshire (VC 32), in 2003

During 2003 I undertook searches for the Buttoned Snout *Hypena rostralis* (L.) and its larval foodplant Hop *Humulus lupulus* L. in the area immediately to the north of Peterborough. This work was part of the survey of this UK Biodiversity Action Plan moth by the Cambridgeshire & Essex Branch of Butterfly Conservation, co-ordinated by Robin Field, with financial support from an English Nature Biodiversity Action Grant. Waring (2003. *British Wildlife* **14**: 285-288) provides the context for this project. While both plant and moth have been found to be well distributed in Essex, and to a lesser extent in south Cambridgeshire (Field *et al.*, 2003. *Atropos* **20**: 11-14), botanical records indicate that the plant has seldom been reported in the area between Peterborough and the county boundary to the north at Market Deeping. However, a